ABSTRACT

PT. Rante Insani Pearl is a company engaged in the mining industry as a mining contractor. The research location in the village of Sei Ketapi, District Paringin, District Balangan, Banjarmasin, South Kalimantan. Problems that occur in the Pit Paringin PT. Pearls Rante Insani there are many puddles that occupies an area of Pit Paringin especially on the ground floor of the mine that interfere with work activity. Therefore, it needs to do an assessment of the existing system of pit dewatering on Paringin Pit.

There are three rain catchment include: rain catchment I widely 0.76km^2 5.1952m^2 discharge water runoff, catchment wide rainfall II 0.19km^2 discharge 1.855m^2 water runoff, catchment wide rainfall III 0,10km^2 discharge 0.476m^3 water runoff and rain catchment wide IV 0.09km^2 runoff water discharge 0.428m^3.

The design of the proposed open channel dimension three is: I have a long open channel outside the lines (a) 1.2m water depth (h) 0.89m, width of the base line (b) 1.02m, width of the channel (B) 2.2m, depth of the channel (d) 1.02m; Height surveillance (l) 0.13m; duct wall tilt angle (α) 60^0. Open channel II has a channel length of the outer side (a) 0.70m, water depth (h) 0.53m, width of the base line (b) 0.61m, width of the channel (B) 1.32m; Depth channel (d) 0.61m; Height surveillance (l) 0.08m; duct wall tilt angle (α) 60^0. While open-III has a long line outside the lines (a) 0.67m, water depth (h) 0.51m, width of the base line (b) 0.58m, width of the channel (B) 1.25m; Depth channel (d) 0.58m; Height surveillance (l) 0.07m; duct wall tilt angle (α) 60^0.

Existing wells at the site of PT. Rante Mutiara Insani basin that occurs because the rest of the mine workings at the lowest elevation of the pit bottom. Known volume of wells prior to the study of 40.716m^3 of water surface at an elevation of 32 masl. By using the flow of water into the mining area can be searched and the long dimension of the pumping wells. Dimensional calculation results obtained from the wells with 700m^3/day discharge actual operating speed of 1500 rpm and 1450 rpm which is of length 79m, width 72m and a depth of 11 m with a capacity of 58.553m^3. Pumping time of the calculation for 29 hours a day.

The resulting total head the pump KSB LCC H 150 - 500-4 XH a maximum capacity of 600m^3/day with the actual discharge of 300m^3/day. Total head of 66m consisting of: Head Static (Hs); 64meters, Velocity Head (Hv), 1.12meters, Friction Head (Hf), 0.63meters, Head turns (HFS); 0,003549meters , Head Diameter Change (Hf2); 0.27meters while the total head produced SOUTHERN CROSS PUMP which pumps a maximum capacity of 500m^3/day with the actual discharge is 156m^3/day. Total head of 64meters consisting of: Head Static (Hs); 64meters, Velocity Head (Hv); 0.2meters, Friction Head (Hf), 0.18meters, Head turns (HFS); 0,000887meters, Head Diameter Change (Hf2); 0.05meters.